Prescription opioids (substitution medications and pain medications) in patients looking for Opioid Agonist Treatment in Northern and Southern Italy, using a 18-month survey methodology

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Summary

Background: In many countries, the broad availability of prescription pain medications (PPMs) and prescription substitution medications (PSMs), coupled with public misconceptions about their safety and addictive potential, have contributed to the recent surge in the non-medical use of prescription opioids (POs), and corresponding increases in treatment admissions for problems related to opioid misuse. This Italian study has aimed to assess the prevalence of the primary substance of abuse, the differences between heroin use and the use of POs in the previous month and the prevalence of combined use (heroin, PSMs and PPMs), while stressing the geographical differences between Northern and Southern Italy.

Methods: This has been a cross-sectional, observational study. The data were collected prospectively, over an 18-month period in 2012 and 2013. The Survey Questionnaire on Opioids was administered during an 18-month survey to all patients entering Opioid Agonist Treatment (OAT) in two National Health Drug Addiction Units – the first in Northern and the second in Southern Italy.

Results: 317 subjects requested OAT at Drug Addiction Units in the cities of Cossato and Bitonto, in Southern and in Northern Italy, respectively. Heroin was named most frequently as the primary substance of abuse, followed by PSMs (buprenorphine and methadone). Heroin was the substance most used in the previous 30 days, followed by PSMs. About half of the patients were only using heroin, approximately a quarter PSMs only, 15% heroin and PSMs together, and 10% PPMs only. Northern Italian patients were characterized by the combined use of heroin and PSMs (OR=0.025), but also by using PPMs – in order of importance, codeine (OR=0.008), oxycodone (OR=0.011), and tramadol (OR=0.013) – as their primary substance of abuse.

Conclusions: In Italy, in patients requesting OAT, the most frequent primary substance of abuse and the most frequently used substance in the previous 30 days is still heroin. As in many other countries, however, the use of POs is increasing, especially if we consider the combined use of heroin and PSMs. In Italy, the dreaded transition from PPMs to heroin still seems almost non-existent, and is just beginning to appear, but only in Northern Italy.

Key Words: Prescription opioids; painkillers; heroin use; geographic differences; Northern and Southern Italy; Heroin and PSMs concomitant use.

1. Introduction

The misuse of prescription opioids (POs) in the USA has increased more than threefold since 1990, reaching epidemic proportions, with substantial increases in their use reported in other countries too, such as Australia and New Zealand. The broad availability of prescription pain medications (PPMs), coupled with public misconceptions about their safety and addictive potential, have contributed to the recent surge in the non-medical use of POs and corresponding increases in treatment admissions for problems...
related to opioid misuse [9, 16, 25, 27]. Indeed, despite the potential benefits of opioid therapy, long-term opioid use may lead to the misuse of prescription substitution medications (PSMs) [3, 4, 28, 30]. Europe seems to be following this trend; about 5% (around 20,000 patients) of all treatment entrants declare that opioids other than heroin are their primary substances of abuse. This is particularly true in Estonia, where 75% report fentanyl as their primary drug, and in Finland, where buprenorphine is reported as the primary drug by 58% of treatment entrants. Other countries with significant proportions of clients reporting methadone, morphine and other opioids as the primary substance of abuse include Denmark, France, Austria, Slovakia and Sweden, where non-heroin opioid users account for between 7% and 17% of all drug clients. The Czech Republic also reports that buprenorphine users accounted for more than 40% of all problematic opioid users between 2006 and 2009 [14]. Moreover, worries are now spreading in the US about the risk of shifting from the initial use of POs to later heroin use. Large-scale epidemiological studies have documented significant increases in heroin use nationwide, particularly over the past 10 years. Part of this increase in heroin use and the apparent migration to a new class of users appears to be due to the concomitant increase in the abuse of POs over the last 20 years [26, 37], arguably accelerated by the release in the mid-1990s of OxyContin [17, 33], which made large quantities of oxycodone hydrochloride readily available for inhalation and intravenous injection. Given that POs are legal, are prescribed by a physician, and are thus considered trustworthy and predictable, many users viewed these drugs as safer to use than other illicit substances, so highlighting the risk that many heroin users could have transitioned to heroin from prescription opioids. Of those who began their opioid abuse in the 1960s, more than 80% indicated that they initiated their abuse with heroin. In a nearly complete reversal four decades later, 75% of those who began their opioid abuse in the 2000s reported that their first regular opioid was a prescription drug [7].

Although availability of POs has increased in all areas, there is evidence that the increase has been greater in rural areas [23]; rural adolescents are more likely than urban ones to report non-medical prescription drug use [18, 19].

As well as the impact of geographical differences, there are other risk factors deriving from PO misuse. Subjects with a lifetime history of substance use disorder are more likely to endorse some aberrant medication-related behaviours [13, 29, 30], as has been reported for patients with a history of alcohol or cocaine abuse, and with alcohol- or drug-related convictions [6, 21].

The Researched Abuse Diversion and Addiction-Related Surveillance (RADARS(R)) System described the characteristics and health effects of 16,209 cases of adolescent prescription drug abuse and misuse. More than half the recorded cases of intentional adolescent exposure to prescription drugs were related to opioids, more specifically, hydrocodone, oxycodone and tramadol, with a significant percentage of suicide attempts [38]. Considering data coming from opioid agonist treatment (OAT) entry facilities, the demographic composition of heroin users has shifted over the last 50 years, so that heroin use has changed from being an inner-city, minority-centred problem to one that has a more widespread geographical distribution, now primarily involving white men and women in their late 20s living outside large urban areas. [7]. Heroin use seems to be a predictor of the finding that the heroin user had been involved in the non-medical use of opioids in previous years [2, 5]; this finding suggests that prescription opioids could be considered a common gateway to heroin use [7, 20]. Interestingly, together with this shift from POs to heroin, so too the combined, the simultaneous use of heroin plus POs has been reported [8, 31].

The main aims of the present study have been to evaluate, in patients entering OAT in Northern and Southern Italian Out-patient Services:

- The prevalence of having a single primary substance of abuse.
- The differences between heroin use and the use of POs in the previous month; these have been specified in the present paper by dividing POs into PSMs (medications used in Agonist Opioid Treatment) and PPMs.
- The prevalence of combined use (i.e. heroin plus PSMs and/or PPMs).

In addition, there has been the need to check whether the worldwide observed trend of documented heroin use accompanied by rising PO use in patients requesting OAT is valid for Italy.

2. Methods

A pilot study of collective surveys from five European sites was designed to check the validity of the concept and feasibility of future study methods, data collection/aggregation and related study materials. Progress was continually assessed through pe-
periodic conference calls between the local European study coordinator and the U.S. investigator and study personnel. These data were evaluated and reviewed by the team of onsite investigators and then used to enhance the data collection instrument and methods to be used in future surveys. In this study, we have reported the results obtained in two centres – one in Northern and the other in Southern Italy.

2.1. Design of the study

This was a two-centre observational study designed to survey new enrollees in participating opioid treatment programmes. Participants were presented with a survey at intake, along with other standard intake forms and surveys. An information sheet for all patients accompanied the survey to inform them of the purpose of the study, and provide assurance of anonymity. All the study documents had been translated into the primary language of the study site country. Informed consent was not practical, as it was the documentation alone that had created a link to the participants’ identities and, therefore, increased the risk run by participants. Participants completed a survey in a private or semi-private setting; upon completion, the survey was sent back to a staff member. No treatment or other interventions were implemented during the study.

2.2. Assessment

The development of the survey and information sheet for patients were modeled on the survey and patient information sheet used by the U.S. opioid treatment study (RADARS System Opioid Treatment Program, founded in 2005). The surveys were created in consultation with survey design specialists and other drug treatment experts. The patient surveys were designed to minimize the burden imposed on patients, and to put questions in the clearest and most concise manner possible, considering the many languages into which it had to be translated. Survey responses are anonymous. We anticipate no risks to participants during survey completion, other than the time needed to complete the survey.

Survey questions included inquiries about:
1. Demographics
2. Treatment history
3. Drugs used to ‘get high’ in the past 30 days, frequency and route of abuse
4. Source used to obtain drugs
5. Consequences of drug abuse

The drugs listed in the survey are based on known European market-specific prescription drugs, whether branded or generic. For each drug class, there are corresponding branded products, and a generic all-inclusive category called “other known”. The general structure of the drugs listed in the survey is:

- Opioid/Stimulant drug class (e.g., buprenorphine)
  - Buprenorphine, type unknown (used when a participant knows he/she took buprenorphine, but is unsure about, or cannot remember, the exact type)
  - Branded product A (e.g., Suboxone)
  - Branded product B (e.g., Subutex)
  - Generic products, rather than: Brand A or Brand B above (e.g., other buprenorphine tablets not listed here)

Patients (age range: 18-65 years) were presented with the survey at treatment intake; they reported their drug use during the past 30 days. The survey designed for patients first asked for basic demographic information (gender, age and postal code); treatment history; employment. In addition, the survey collected information on the drugs used to ‘get high’ in the past 30 days, including prescription opioids (buprenorphine, codeine, fentanyl, hydrocodone, hydromorphone, methadone, morphine, oxycodone, oxymorphone, tramadol), prescription stimulants (methylphenidate and amphetamine), and heroin. Frequency of abuse and route of abuse were queried too, as well as treatment history. The primary outcome measure was the rate of abuse over time for heroin, prescription substitution medications – PSMs (methadone, buprenorphine), prescription pain medications – PPMs) and each pharmaceutical active ingredient.

Patients were recruited at the Drug Addiction Unit (SerT) of the city of Cossato, Biella (Northern Italy) and at the Drug Addiction Unit (SerT) of the city of Bitonto, Bari (Southern Italy) over a period of 18 months. Geographical differences between North and South are a topic of great interest, considering their different levels of development. North Italy is distinguished by its high urban population density and more work opportunities compared with South Italy, where a higher proportion of the population lives in non-urban areas and there are fewer opportunities to find work.

2.3 Statistical analysis

T-test and the Chi-squared criterion were used to compare continuous or parametric variables be-
between the groups of patients recruited in Northern and Southern Italy. In consideration of the exploratory nature of the study, we referred to levels of significance fixed at \( p<0.05 \).

For each patient, we calculated a combined use of heroin and POs, while differentiating between two types of POs: PSMs and PPMs.

To maximize differences between Northern and Southern Italy, we used a logistic regression analysis. Logistic regression is a general statistical technique through which one can analyse the relationship between a dependent or criterion variable (in this case, the fact of being a patient from Southern Italy) and a set of independent or predictor variables (heroin and POs use). The analysis tends to ‘simplify’ the prediction equation by deleting independent variables that do not substantially enhance prediction accuracy, once certain other independent variables have been included.

3. Results

Over a period of 18 months, 317 subjects requested OAT at the Drug Addiction Units of the cities of Cossato or Bitonto. Mean age was 27.95±7.7 (range: 18-52); 213 (67.2%) were males and 104 (32.8%) females. Males and females did not differ in age \( (p=0.69) \), elapsed time from last treatment \( (p=0.38) \), being at their first treatment \( (p=0.19) \), having relapsed at an early stage \( (p=0.63) \), having a job \( (p=0.19) \).

148 (46.7%) patients requested treatment at the SerT (addict unit) in the city of Cossato. Of these, 98 (66.2%) were males and 50 (33.8%) females; mean age was 25.18±6.9 (range: 18-47).

169 (53.3%) patients requested treatment at the SerT in the city of Bitonto. Of these, 115 (68.0%) were males and 54 (32.0%) females; mean age was 30.38±7.6 (range: 18-52).

A majority of the sample had had treatment in the past, had relapsed late (>1 month) or were at their first treatment. Nearly all had lost their jobs (table 1). Heroin was the most frequent primary substance of abuse, followed either by buprenorphine or by metha-

| Table 1. Demographic and clinical characteristics, Primary Substance of Abuse and substances used in the previous 30 days in Italian patients requesting Opioid agonist treatment |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                | Total N=317     | Northern Italy N=148 | Southern Italy N=169 | T/chi | p       |
| Demographic and clinical characteristics |                        |                                |                          |      |
| Age 27.95±7.7 (18-52 ranged) | 25.18±6.9 (18-47 ranged) | 30.38±7.6 (18-52 ranged) | -6.37 | <0.001 |
| Male gender 213 (67.2) | 98 (66.2)a | 115 (68.0)a | 0.12 | 0.72 |
| Past treatment (yes) 175 (55.2) | 60 (40.5)a | 115 (68.0)b | 24.14 | <0.001 |
| Early (<1 month) relapse 66 (37.7) | 7 (11.7)a | 59 (51.3)b | 26.37 | <0.001 |
| Without a job 300 (94.6) | 142 (95.9)a | 158 (93.5)a | 0.93 | 0.33 |
| Primary Substance of Abuse |                                |                          |                          |      |
| Heroin 162 (51.1) | 70 (47.3)a | 92 (54.4)a | 53.36 | <0.001 |
| Buprenorphine 48 (15.1) | 33 (22.3)a | 15 (8.9)b |
| Methadone 37 (11.7) | 26 (17.6)a | 11 (6.5)b |
| Codeine 10 (3.2) | 7 (4.7)a | 3 (1.8)a |
| Tramadol 10 (3.2) | 6 (4.1)a | 4 (2.4)a |
| Oxycodone 4 (1.3) | 3 (2.0)a | 1 (0.6)a |
| Fentanyl 3 (0.9) | 1 (0.7)a | 2 (1.2)a |
| Others 43 (13.6) | 2 (1.4)a | 41 (24.3)b |
| Substance use in the previous 30 days |                                |                          |                          |      |
| Heroin 199 (62.8) | 84 (56.8)a | 115 (68.0)b | 4.30 | 0.038 |
| Prescription opioids 160 (50.5) | 114 (77.0)a | 46 (27.2)b | 78.30 | <0.001 |
| PSMs 125 (39.1) | 94 (63.5)a | 31 (18.3)b | 67.40 | <0.001 |
| PPMs 36 (11.4) | 21 (14.2)a | 15 (8.9)a | 2.21 | 0.157 |
| Prescription stimulants 1 (0.3) | 1 (0.7)a | 0 (0)a | 1.14 | 0.284 |

Each letter [a, b] denotes a subset of site categories whose column proportions do not differ significantly from each other at the .05 level.
done. Heroin was the substance most used in the previous 30 days, followed by one of the POs. A majority of the latter cases corresponded to one of the PSMs, and only a small percentage (about 10%) to one of the PPMs. Use of prescribed stimulants was almost non-existent. As to the combined use of heroin and POs, about half the patients were only using heroin, approximately a quarter PSMs only, 15% were using heroin together with PSMs, and 10% PPMs only (table 2).

Subjects requesting OAT in Northern Italy were younger, more frequently at their first treatment, and had not had an early (<1 month) relapse, unlike their counterparts from Southern Italy. As their primary substance of abuse, they were more frequently using buprenorphine and/or methadone. In the previous 30 days they made less frequent use of heroin and more frequent use of PSMs (table 1). Apart from the fact of making less frequent use of heroin only, but more frequent use of PSMs only, their combined use of heroin and PSMs was more frequent, too (table 2).

Results of forward logistic regression, which include, as a predictive factor, being resident in Southern Italy, are presented in table 3. On the basis of this analysis, the odds of being from Southern Italy were significantly higher in the case of an age above 26 (OR=4.974) and an elapsed time from last treatment less than or equal to 1 month (OR=4.590). Conversely, patients from Northern Italy were distinguished by the combined use of heroin and PSMs (OR=0.025),

| Table 2. Heroin and prescription opioid combined use in the past 30 days in Italian patients requesting Opioid agonist treatment |
|---------------------------------|-----------------|------------------|
| Site                           | Total N=317     | Northern Italy N=148 | Southern Italy N=169 |
| None                           | 12 (3.8)        | 3 (2.0)a          | 9 (5.3)a |
| Heroin only                    | 145 (45.7)      | 31 (20.9)a        | 114 (67.5)b |
| Prescription Substitution Medications only | 73 (23.0)      | 43 (29.1)a        | 30 (17.8)b |
| Prescription Pain Medications only | 33 (10.4)     | 18 (12.2)a        | 15 (8.9)a |
| Heroine and PSMs               | 51 (16.1)       | 50 (33.8)a        | 1 (0.6)b |
| Heroine and PPMs               | 2 (0.6)         | 2 (1.4)a          | 0 (0.0)a |
| Heroin, PSMs and PPMs          | 1 (0.3)         | 1 (0.7)a          | 0 (0.0)a |

Chi-squared=102.23, df=6, p=0.000
Each letter denotes a subset of site categories whose column proportions do not differ significantly from each other at the .05 level.

| Table 3. Logistic regression: Southern Italy location is criterion. Basic demographic information (age, gender, treatment history, health-care worker status), primary substance of abuse and heroin prescription opioid combination are predictors. |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Predictors                      | Step | B     | Exp(B) | Min  | Max  | p   |
| Older age                       | 2    | 1.60  | 4.974 | 2.187 | 11.313 | 0.000 |
| Primary substance of abuse      | 3    |       |       |      |      | 0.007 |
| 1. Buprenorphine                | -3.19 | 0.041 | 0.006 | 0.284 | 0.001 |
| 2. Codeine                      | -4.89 | 0.008 | 0.000 | 0.197 | 0.003 |
| 3. Heroin                       | -3.46 | 0.031 | 0.005 | 0.203 | 0.000 |
| 4. Methadone                    | -3.93 | 0.020 | 0.003 | 0.150 | 0.000 |
| 5. Oxycodone                    | -4.51 | 0.011 | 0.000 | 0.486 | 0.020 |
| 6. Tramadol                     | -4.35 | 0.013 | 0.001 | 0.276 | 0.005 |
| Combinations                    | 1    |       |       |      |      | 0.000 |
| 1. Heroin & PSMs                | -3.69 | 0.025 | 0.002 | 0.280 | 0.004 |
| 2. ≤1 month Elapsed time from last treatment | 4  | 1.52  | 4.590 | 1.526 | 13.802 | 0.007 |
| Constant                        | 2.49 |       |       |      |      | 0.000 |

Not in the equation: Gender; Working status
Chi-squared: 198.62 df=16 p<0.001; Correct classified subjects: 83.3%
but also by their use of PPMs – in order of importance, codeine (OR=0.008), oxycodone (OR=0.011), tramadol (OR=0.013), methadone (OR=0.020), heroin (OR=0.031) and buprenorphine (OR=0.041) – as their primary substance of abuse.

4. Discussion

In Italy, in patients requesting OAT, the most frequent primary substance of abuse is still heroin. Heroin is the most frequently used substance in the 30 days prior to entering treatment. POs, especially PSMs, show a rising frequency when used without other substances. The combined use of heroin and PSMs is not particularly frequent (15%). The combined use of heroin, PSMs and PPMs is very rare.

In Southern Italy, patients were older and tended to relapse soon after their latest treatment. In Northern Italy, patients tended to use PPMs, and the use of a combination of heroin and PSMs was more frequent.

In Northern Italy, methadone and buprenorphine are now being reported more frequently as the primary substance of abuse, but heroin is still the first primary substance of abuse.

With respect to opioid use before entering OAT, what is observed in most other countries is a decline in heroin use year by year, whereas the use of POs – notably morphine/hydromorphone – has been increasing.

This temporal shift pattern from heroin to PO use reflects trends documented in Canadian street drug users, where diverse forms of PO use have been observed as increasingly prevalent over heroin use [22]. Among primary heroin abusers, before they entered a methadone maintenance treatment programme, 69% reported abusing POs. In United States (US) surveys, more than two-thirds reported lifetime heroin abuse and 83% lifetime PO abuse, in particular: oxycodone (79%), hydrocodone (67%), methadone (40%), morphine (29%), heroin (13%), hydromorphone (16%), fentanyl (9%) and buprenorphine (1%) [31]. The use of non-opioid drugs was reported to be high in young people, especially if the use of stimulants is considered. Out of a total of 16,209 cases of adolescents intentionally exposed to prescription drugs, 68% of them taking opioids and 32% stimulants, the most frequently misused or abused drugs were hydrocodone, amphetamines, oxycodone, methylphenidate and tramadol [38]. Our data did not confirm this trend.

The use of heroin by addicts in Northern Italy in the 30 days prior to entering OAT included more prescription opioids, whereas Southern Italian ones preferred heroin only.

A survey from the United States showed that in the 30 days prior to entering OAT, heroin was abused by 59% of the respondents and POs by 67%. Almost two-fifths indicated that a PO was their primary drug, while half reported heroin [31]. The estimated total number of opioid analgesic prescriptions in the US increased by 104% over ten years, from 43.8 million in 2000 to 89.2 million in 2010 [34]. Just in Texas, for instance, the annual number of opioid analgesic abuse cases increased by 160% [15]. Recent data suggest that prescription opioid misuse and heroin use are intertwined; there is contemporary evidence of an evolving flux between prescription opioid use and heroin use in urban areas. Ethnographic work from Montreal has shown that individuals historically at risk of heroin injection have begun shifting to injecting prescription opioids [32]. Additional evidence suggests a high prevalence of prescription abuse in drug injection, often preceding the initiation of heroin use [24].

In considering opioid abuse, we found a striking geographical difference between North and South Italy. In fact, heroin addicts from Northern Italy present a higher level of POs only and, again, of a combination of POs plus heroin, whereas heroin addicts from Southern Italy tend to use heroin only. In line with this observation, enrollees in opioid treatment programmes located in urban areas with a high population density were more likely to use prescription opioids plus heroin than heroin only, and were more likely to use prescription opioids only than heroin only [8]. Likewise, creating a parallel with Italy, the opioid analgesic rate per 100,000 was found to be highest in North-Eastern Texas and lowest in the southern part of the same state [15]. However, an inverse relationship was observed between POs and heroin abuse across three geographical areas in the US, that is, in contrast with our finding, if we consider Northern Italy as mainly containing urban areas and Southern Italy as mostly containing rural ones. In fact, among patients in the least densely populated areas of the USA, 91.4% reported abusing POs and 29.1% reported abusing heroin. Among patients in moderately populated counties, 86.8% abused POs and 34.4% abused heroin, and among patients in the most densely populated counties 52.7% abused POs while 77.2% abused heroin [31]. Rural participants were almost five times more likely than their urban counterparts to have misused prescription opiates. The prevalence of prescription opiate misuse was significantly higher among the rural probationers.
These findings have been corroborated by a more recent study in which nonmedical prescription opioid misuse is still concentrated in areas in the USA that have a large rural population, such as Kentucky, West Virginia, Alaska, and Oklahoma. A few possible explanations of this phenomenon have been put forward, taking into consideration the increased sales and availability of opioid analogics in rural areas: the outward migration of upwardly mobile young adults from rural areas, which increases economic deprivation and creates an aggregation of young adults at high risk of drug use; a widespread presence of kinship and social networks allowing faster diffusion of non-medical prescription opioids among those at risk; and a stressful environment that aggravates economic deprivation and unemployment [18, 23]. Again, heroin use was found to be highest in the Pacific and Quebec regions, whereas morphine/hydromorphone was most commonly reported in the Atlantic and Prairie regions, while opioid use prevalence in the Ontario region was almost equally divided between heroin and morphine/hydromorphone [22]. Hydrocodone and acetaminophen, followed by oxycodone and a combination of oxycodone and acetaminophen, were the most commonly reported drugs at initiation into opioid misuse. Initiation of opioid misuse typically followed the initial use of alcohol, marijuana, and prescription stimulants, and preceded the initiation of other drugs, such as cocaine, methamphetamine, and heroin. In US studies, over four-fifths of these patients reported that they initiated opioid misuse prior to taking heroin; on average, opioid misuse came two years earlier [26]. This emerging dynamic, which has been developing between opioid and heroin misuse and injection drug use, is suggested by two findings. First, four out of five injection drug users misused an opioid before they ever injected heroin – a finding that is in contrast with more conventional patterns according to which opioids are used as a substitute drug after the onset of heroin use. Second, nearly one out of four young injection drug users initiated drug use by injection with a prescription opioid; POs are, in fact, substances that are reported at initiation into injection drug use among young injecting drug users. All but two of these injection drug users later transitioned into injecting heroin [26]. These initiation patterns corroborate findings from recent research on broader samples, i.e., not exclusively young adults or injection drug users, suggesting that opioid misuse [20, 33] or polyopioid misuse [17] may act as a gateway to the use of heroin [11, 24]. This shift may, of course, be related to the fact that heroin is cheaper and more accessible than prescription opioids, and there seems to be widespread acceptance of heroin use among those who abuse opioid products [7]. At present, a limited use of PPMs is starting in Northern Italy.

We found a high percentage frequency for the combined use of heroin and POs, especially in Northern areas of Italy, prior to entry into OAT. Consistently with this finding, at least in the US, many enrollees used heroin and prescription opioids in the month before enrolling in an opioid treatment programme [8]. Even among OAT patients who identified heroin as their primary drug, more than two-thirds reported lifetime POs abuse and more than one third reported their abuse of POs in the previous 30 days [31]. In particular, younger enrollees within opioid treatment programs had increased odds of using prescription opioids only, or prescription opioids together with heroin, rather than heroin only [8]. Some studies on the use of POs are associated with the use of heroin and cocaine [10]. There is a shortage of data on the concomitant use of POs and heroin, while a slightly higher number of data are available on the lifetime use of these opioids. A 2007 study of patients in methadone maintenance programmes found that about one third of primary abusers of opioid pain relievers had ever used heroin and about a tenth had used heroin in the past 30 days [31]. In a more recent study, nearly a third of opioid treatment programme patients surveyed between 2005 and 2009 had used opioid pain relievers and heroin within the past 30 days, and those interviewed in later years of the survey were more likely to use both [8]. Heroin use was found to be a predictor of the non-medical use of opioids during the previous year [2, 5, 36] and also of previous-year opioid pain reliever abuse or dependence [5].

Lastly, we found that heroin addicts in Southern Italy had, in most cases, used heroin only, and that, being older, were more prone to relapses in their old age.

Consistently with the trend for an increase in first time treatment admissions for heroin among older adults [1], heroin use was found to be more prevalent among older OAT enrollees [8]. Over the past 50 years, age at first opioid use has risen from 16 to 23, although it must be noted that recall may be limited in those who reflect on what happened so long ago. Even so, it would appear that today’s heroin users began their use when they were much older than those who began 40 to 50 years ago [7]. Conversely, non-medical prescription drug users are more likely to be young [12] and to be polydrug users [35].
5. Conclusions

In Italy, in patients requesting OAT, the most frequent primary substance of abuse and the most frequently used substance in the previous 30 days proved to be heroin. As in many other countries, the use of prescription opioids is rising, especially if we consider heroin and prescription substitution medications together. The dreaded transition from PPMs to heroin still seems to be almost non-existent in Italy and is now just starting to become a risk, but in Northern Italy only.

References


